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adaptive finite element meshes on hypercubes

Yeh-Ching Chung; Yaa-Jyun Yeh; Chia-Cheng Liu;

Parallel and Distributed Systems, 1994. International Conference on , 19-21 D 1994

Pages: 210 - 215

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4 A three dimensional computational model for evaluation of flow patt in the main pulm nary artery

Chengfeng Zhao; Ha, B.; Zalesak, R.; Katayama, H.; Krzeski, R.; Ferreiro, J.; Lucas, C.; Henry, C.W.; Wilcox, B.R.;

Biomedical Engineering Conference, 1993., Proceedings of the Twelfth

Southern, 2-4 April 1993

Pages: 120 - 122

Print Format

#### [Abstract] [PDF Full-Text (276 KB)] IEEE CNF

### 5 A strategy f r finite-element mesh adaptati n in ptimisati n pr ble f inverse electr statics

Bramanti, A.; Di Barba, P.; Savini, A.; Computation in Electromagnetics, 2002. CEM 2002. The Fourth International Conference on (Ref. No. 2002/063), 8-11 April 2002 Pages: 2 pp.

#### [PDF Full-Text (233 KB)] [Abstract]

### 6 Sensitivity analysis and automatic design of voltage ratio in an optic instrument voltage transformer

Cui Xiang; Zhang Guogiang;

Magnetics, IEEE Transactions on , Volume: 35 , Issue: 3 , May 1999

Pages:1769 - 1772

#### [Abstract] [PDF Full-Text (328 KB)] **IEEE JNL**

### 7 Solution of inverse problems in electromagnetic NDE using finite element methods

Yan, M.; Udpa, S.; Mandayam, S.; Sun, Y.; Sacks, P.; Lord, W.; Magnetics, IEEE Transactions on , Volume: 34 , Issue: 5 , Sept. 1998 Pages: 2924 - 2927

#### [Abstract] [PDF Full-Text (296 KB)] **IEEE JNL**

### 8 A two-dimensional design and modeling of semiconductor lasers

Osman, N.; Tsuji, Y.; Koshiba, M.;

Magnetics, IEEE Transactions on , Volume: 33 , Issue: 2 , March 1997

Pages:1532 - 1535

#### [Abstract] [PDF Full-Text (348 KB)] **IEEE JNL**

#### 9 Performance evaluation of MPI implementations and MPI based Para **ELLPACK solvers**

Markus, S.; Kim, S.B.; Pantazopoulos, K.; Ocken, A.L.; Houstis, E.N.; Wu, P.; Weerawarana, S.; Maharry, D.;

MPI Developer's Conference, 1996. Proceedings., Second, 1-2 July 1996

Pages:162 - 169

#### [Abstract] [PDF Full-Text (612 KB)] IEEE CNF

## 10 Load balancing of dynamic and adaptive mesh-based computati ns

Schloegel, K.; Karypis, G.; Kumar, V.;

Reliable Distributed Systems, 1998. Proceedings. Seventeenth IEEE Symposiu on, 20-23 Oct. 1998

Pages:311

#### [Abstract] [PDF Full-Text (76 KB)]

#### 11 Mesh partiti ning f r distributed systems

Jian Chen; Taylor, V.;

High Performance Distributed Computing, 1998. Proceedings. The Seventh International Symposium on , 28-31 July 1998

Pages: 292 - 300

#### [Abstract] [PDF Full-Text (136 KB)]

12 Evaluati n f perfectly matched layer mesh terminati ns in finiteelement bi electr magnetic scattering c mputati ns

Tang, J.; Geimer, S.D.; Paulsen, K.D.;

Microwave Theory and Techniques, IEEE Transactions on , Volume: 47 , Issue 4, April 1999

Pages:410 - 415

[Abstract] [PDF Full-Text (256 KB)] **IEEE JNL** 

### 13 A finite-element-boundary-integral method for scattering and radia by two- and three-dimensional structures

Jin, J.-M.; Volakis, J.L.; Collins, J.D.;

Antennas and Propagation Magazine, IEEE, Volume: 33, Issue: 3, June 1991 Pages: 22 - 32

[PDF Full-Text (816 KB)] [Abstract] **IEEE JNL** 

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Tang, J.; Geimer, S.D.; Paulsen, K.D.;

Microwave Theory and Techniques, IEEE Transactions on , Volume: 47 , Issue 4, April 1999

Pages:410 - 415

[Abstract] [PDF Full-Text (256 KB)] **IEEE JNL** 

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Yan, M.; Udpa, S.; Mandayam, S.; Sun, Y.; Sacks, P.; Lord, W.; Magnetics, IEEE Transactions on , Volume: 34 , Issue: 5 , Sept. 1998 Pages: 2924 - 2927

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Yeh-Ching Chung; Yaa-Jyun Yeh; Chia-Cheng Liu;

Parallel and Distributed Systems, 1994. International Conference on , 19-21 D 1994

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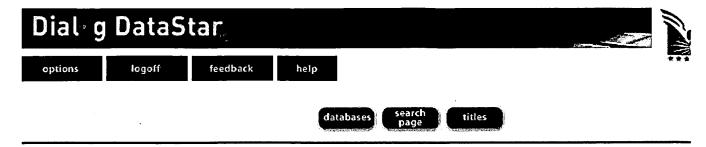
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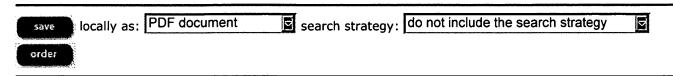
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4336366, C9303-7400-011; 930128.

#### Title

An adaptive **finite element** analysis system for 3-D solids.

#### Author(s)

Hung-K-Y; Tan-S-T; Yuen-M-H-F; Ed. by Ko-N-W-M; Tan-S-T.

#### **Author affiliation**

Dept of Mech Eng, Hong Kong Univ, Hong Kong.

#### Source

Proceedings of the International Conference on Manufacturing Automation, Hong Kong, 10-12 Aug. 1992, p.571-5.

Sponsors: ASM, British Council, Cathay Pacific, Motorola, SME, SPIE, Univ. Hong Kong, et al. Published: Univ. Hong Kong, Hong Kong, 1992, xix+913+suppl. pp.

#### **Publication year**

1992.

### Language

EN.

### Publication type

CPP Conference Paper.

#### Treatment codes

P Practical.

#### Abstract

An adaptive **finite element** analysis system for 3D solids is presented. The system consists of a solid modeller, a **mesh** generator, a **finite element** analysis processor and an error **evaluator**. Starting with a CSG solid model and given the loads, boundary conditions and the initial nodal density distribution, **finite element mesh** is generated using a point-based two stage hierarchical **finite element mesh** generation algorithm. Analysis is conducted using a general **finite element** analysis package. Error estimate is calculated for each **element** after the analysis and the result is used to generate a new **mesh** with higher **mesh** density in regions where the estimated error is high. The procedure is repeated until the error estimate calculated falls within prescribed criteria. (8 refs).

#### Descriptors

adaptive-systems; finite-element-analysis; solid-modelling.

#### Keyw rds

adaptive **finite element** analysis system; 3D solids; solid modeller; **mesh** generator; **finite element** analysis processor; error **evaluat r**; CSG solid model; boundary conditions; initial nodal density distribution; **finite element mesh**; point based two stage hierarchical **finite element mesh** generation algorithm; general **finite element** analysis package; estimated error.

#### Classificati n codes

C7400 (Engineering).

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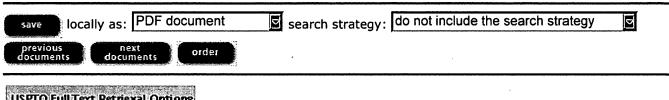
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4926108, C9505-7310-030; 950420.

**Title** 

Intelligent finite element mesh generation.

Author(s)

Kang-E; Haghighi-K.

**Author affiliation** 

Dept of Agric Eng, Purdue Univ, West Lafayette, IN, USA.

Engineering-with-Computers (USA), vol.11, no.2, p.70-82, 1995.

**CODEN** 

ENGCE7.

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ISSN: 0177-0667, CCCC: 0177-0667/95/ (\$2.00+0.20).

Publication year

1995.

Language

EN.

Publication type

J Journal Paper.

Treatment codes

A Application; P Practical; T Theoretical or Mathematical.

**Abstract** 

A knowledge-based and automatic finite element mesh generator (INTELMESH) for two-dimensional linear elasticity problems is presented. Unlike other approaches, the proposed technique incorporates the information about the object geometry as well as the boundary and loading conditions to generate an a priori finite element mesh which is more refined around the critical regions of the problem domain. INTELMESH uses a blackboard architecture expert system and the new concept of substracting to locate the critical regions in the domain and to assign priority and mesh size to them. This involves the decomposition of the original structure into substructures (or primitives) for which an initial and approximate analysis can be performed by using analytical solutions and heuristics. It then uses the concept of wave propagation to generate graded nodes in the whole domain with proper density distribution. INTELMESH is fully automatic and allows the user to define the problem domain with minimum amount of input such as object geometry and boundary and loading conditions. Once nodes have been generated for the entire domain, they are automatically connected to form well-shaped triangular elements ensuring the Delaunay pr perty. Several examples are presented and discussed. (24 refs).

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6925036, C2001-06-4260-032; 20010521.

Title

Curvature-dependent triangulation of implicit surfaces.

Author(s)

Karkanis-T; Stewart-A-J.

#### Author affiliation

Toronto Univ, Ont, Canada.

S urce

IEEE-Computer-Graphics-and-Applications (USA), vol.21, no.2, p.60-9, March-April 2001., Published: IEEE.

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ISSN: 0272-1716, CCCC: 0272-1716/2001/ (\$10.00).

Availability

SICI: 0272-1716(200103/04)21:2L.60:CDTI; 1-T.

Publication year

2001.

Language

EN.

#### Publication type

J Journal Paper.

#### Treatment codes

P Practical; T Theoretical or Mathematical.

#### Abstract

Implicit surfaces appear in many applications, including medical imaging, molecular modeling, computer aided design, computer graphics and finite element analysis. Despite their many advantages, implicit surfaces are difficult to render efficiently. Today's real-time graphics systems are heavily optimized for rendering triangles, so an implicit surface should be converted to a mesh of triangles before rendering. Our algorithm polyonalizes an implicit surface. The algorithm generates a mesh of close-to-equilateral triangles with sizes dependent on the local surface curvature. We assume that the implicit surface is connected and G/sup 1/ is smooth (that is, the tangent plane varies continuously over the surface). The algorithm requires an evaluat r for the implicit function defined at all points in space, an evaluat r for the function gradient defined at points near the surface, and a bounding box around the surface. The output of the algorithm is good for applications requiring a wellbehaved triangulation, such as rendering systems and finite element partial differential equation

(PDE) solvers. (5 refs).

#### Descript rs

<u>computational-geometry</u>; <u>mesh-generation</u>; <u>rendering-computer-graphics</u>; <u>surface-fitting</u>.

#### Keyw rds

curvature dependent triangulation; implicit surfaces; medical imaging; molecular modeling; computer aided design; computer graphics; **finite element** analysis; rendering; real time graphics; **mesh** generation; local surface curvature; partial differential equation.

#### **Classification codes**

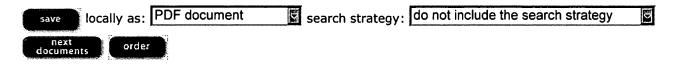
C4260 (Computational geometry). C6130B (Graphics techniques).

C4130 (Interpolation and function approximation (numerical analysis)).

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1 Poster Session: Deformation of finite element meshes using directly manipulated freeform deformation

Norbert Frisch, Thomas Ertl

June 2002 Proceedings of the seventh ACM symposium on Solid modeling and applications

Full text available: pdf(704.19 KB)

Additional Information: full citation, abstract, references, citings, index terms

CrashViewer [5, 18] is a tool for visualizing car crash simulation input and output data consisting of nite element meshes. For a shorter work ow, a feature for local deformation of the car components represented by FE meshes is desired. This feature allows to quickly make minor corrections and enhancements directly on the FE mesh. The roundtrip through the CAD department and the remeshing of the CAD representation is avoided. The crash simulation can be started immediately with the modified car ...

**Keywords**: CAD, free-form deformation, nite elements

Production ready feature recognition based automatic group technology part coding Arlo L. Ames



May 1991 Proceedings of the first ACM symposium on Solid modeling foundations and CAD/CAM applications

Full text available: pdf(907.02 KB) Additional Information: full citation, references, citings, index terms

Towards efficient partial evaluation

Karoline Malmkjær

August 1993 Proceedings of the 1993 ACM SIGPLAN symposium on Partial evaluation and semantics-based program manipulation

Full text available: pdf(1.09 MB)

Additional Information: full citation, abstract, references, citings, index terms

In general, a partial evaluator needs to keep track of the tasks that have already been completed or initiated, so that it can recognize when to stop unfolding. In the MIX-style polyvariant specialization algorithm, this is accomplished by a global log. This is a very general technique, so it is not surprising that the algorithm is not particularly efficient. In many special cases a simpler technique would suffice. In this paper, we identify some classes of such special cases by ...

The family of concurrent logic programming languages

Ehud Shapiro

September 1989 ACM Computing Surveys (CSUR), Volume 21 Issue 3

Full text available: pdf(9.62 MB)

Additional Information: full citation, abstract, references, citings, index terms

Concurrent logic languages are high-level programming languages for parallel and distributed systems that offer a wide range of both known and novel concurrent programming techniques. Being logic programming languages, they preserve many advantages of the abstract logic programming model, including the logical reading of programs and computations, the convenience of representing data structures with logical terms and manipulating them using unification, and the amenability to metaprogrammin ...

A new 3D adaptive finite element scheme with 1-irregular hexahedral element meshes Don Morton, John M. Tyler

March 2000 Proceedings of the 2000 ACM symposium on Applied computing

Full text available: pdf(676.98 KB) Additional Information: full citation, references, index terms

**Keywords**: adaptive mesh, finite elements, hexahedral mesh

6 On a Data Structure for Adaptive Finite Element Mesh Refinements

Werner C. Rheinboldt, Charles K. Mesztenyi

June 1980 ACM Transactions on Mathematical Software (TOMS), Volume 6 Issue 2

Full text available: pdf(1.14 MB) Additional Information: full citation, references, citings, index terms

7 Automatic finite-element mesh generation from geometric models—A point-based approach

Y. T. Lee, A. Pennington, N. K. Shaw

October 1984 ACM Transactions on Graphics (TOG), Volume 3 Issue 4

Full text available: pdf(994.11 KB) Additional Information: full citation, references, citings, index terms

Finite element mesh generation employing satellite graphics

Sze-Keung Lee, Walter S. Reed

June 1976 Proceedings of the 13th conference on Design automation

Full text available: pdf(496.59 KB) Additional Information: full citation, abstract, references, index terms

The use of a satellite graphics system is presented as an approach to preprocessing finite element analysis data. The paper discusses the use of curved isoparametric shape functions as the basis of finite element mesh generation and the effects this approach has on the design of a system to support these activities. A minicomputer based design system is presented and its application to a practical three dimensional mesh generation problem is demonstrated.

Technical reports

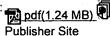
SIGACT News Staff

January 1980 ACM SIGACT News, Volume 12 Issue 1

Full text available: pdf(5.28 MB) Additional Information: full citation

The multilevel finite element method for adaptive mesh optimization and visualization of volume data

Roberto Grosso, Christoph Lürig, Thomas Ertl October 1997 Proceedings of the 8th conference n Visualization '97



Full text available: pdf(1.24 MB) Additional Information: full citation, references, citings, index terms

11 A knowledge system for automatic finite element mesh generation: AMEKS

L. R. Phillips, J. L. Mitchiner, T. D. Blacker, Y. T. Lin

June 1988 Proceedings of the first international conference on Industrial and engineering applications of artificial intelligence and expert systems -Volume 2

Full text available: 🔂 pdf(817.46 KB) Additional Information: full citation, references, citings, index terms

12 Session 10A: power analysis and optimization: Fast analysis and optimization of power/ground networks

Haihua Su, Kaushik Gala, Sachin S. Sapatnekar

November 2000 Proceedings of the 2000 IEEE/ACM international conference on Computer-aided design

Full text available: pdf(567.71 KB) Additional Information: full citation, abstract, references, citings

This paper presents an efficient method for optimizing power/ground (P/G) networks. It proposes a structured skeleton that is intermediate to the conventional method that uses full meshes (which are hard to analyze efficiently), and tree-structured P/G networks (which provide poor performance). As an example, we consider a P/G network structure modeled as an overlying mesh with underlying trees originating from the mesh, which eases the task of analysis with acceptable performance sacrifices. A ...

13 Finite element mesh generation for planar and shell type structures

James C. Cavendish, James A. Wixom

December 1975 Proceedings of the SIGNUM meeting on Software for partial differential equations

Full text available: pdf(196.61 KB) Additional Information: full citation, abstract, references, index terms

In many cases, the overriding difficulty associated with finite element analyses of complex structures is the generation of error-free finite element meshes. In view of this situation, a number of mesh generation schemes for planar (e.g., [1], [2]) and shell (e.g., [3], [4]) structures have recently been proposed (see [5] for an extensive bibliography). At one extreme are the fully automatic methods in which the computer is used to determine regions of high and low element densities and the ...

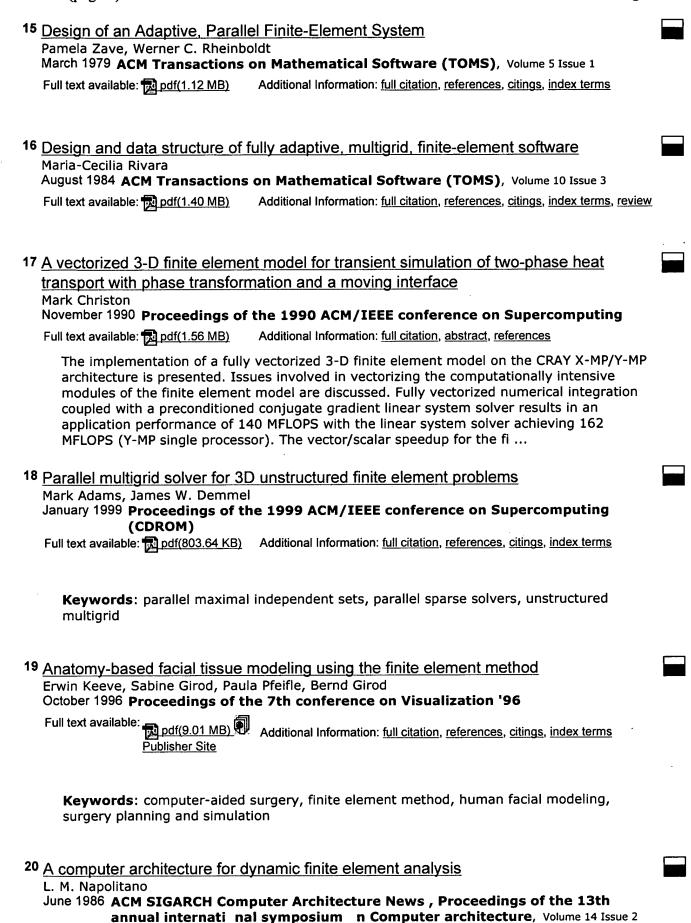
14 Session C3: mesh and flow visualization: Case study: visual debugging of finite element codes

Patricia Crossno, David H. Rogers, Christopher J. Garasi October 2002 Proceedings of the conference on Visualization '02

Full text available: pdf(313.25 KB) Additional Information: full citation, abstract, references, index terms

We present an innovative application developed at Sandia National Laboratories for visual debugging of unstructured finite element physics codes. Our tool automatically locates anomalous regions, such as inverted elements or nodes whose variable values lie outside a prescribed range, then extracts mesh subsets around these features for detailed examination. The subsets are viewed using color coding of variable values superimposed on the mesh structure. This allows the values and their relative s ...

**Keywords:** parallel finite element codes and simulations, visual debugging



Full text available: pdf(910.76 KB) Additional Information: full citation, abstract, references, index terms

The explicit finite element method for dynamic structural analysis can be expressed in a

highly parallel form. A proposed architecture is described that addresses the fundamental algorithmic issues of the method. An approximation equation for the efficiency is given as a function of processing time for a single element, the fundamental interprocessor communication time, the number of processors, and the number of finite elements. The predicted speedups are plotted against postulated paralle ...

Results 1 - 20 of 200

Result page: **1** <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> <u>8</u> <u>9</u> <u>10</u>

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DATE: Monday, December 13, 2004

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	L2	mesh and simplices	37
	L1	finite element mesh and evaluator	1

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## **Hit List**



**Search Results -** Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 20020032494 A1

Using default format because multiple data bases are involved.

L1: Entry 1 of 1

File: PGPB

Mar 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020032494

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020032494 A1

TITLE: Feature modeling in a finite element model

PUBLICATION-DATE: March 14, 2002

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Kennon, Stephen R. Austin TX US
Ward, Steven B. Austin TX US

US-CL-CURRENT: 700/98; 700/29, 700/30

ull Title Citation Front Review Classification Date Reference Sequences Attachme	ents Claims KWC
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Term	Documents
FINITE	97480
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ELEMENT	1188436
ELEMENTS	1559131
MESH	249614
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Search Results - Record(s) 1 through 10 of 10 returned.

☐ 1. Document ID: US 20040075656 A1

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L3: Entry 1 of 10

File: PGPB

Apr 22, 2004

PGPUB-DOCUMENT-NUMBER: 20040075656

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040075656 A1

TITLE: Method and apparatus for multi-dimensional shape representation via shock

flows

PUBLICATION-DATE: April 22, 2004

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Kimia, Benjamin B. Providence RI US Fol-Leymarie, Frederic Laval NJ CA Tek, Huseyin Princeton US

US-CL-CURRENT: 345/420

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC	
1 - 1	Drawi De

File: PGPB

### ☐ 2. Document ID: US 20040034514 A1

Feb 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040034514

PGPUB-FILING-TYPE: new

L3: Entry 2 of 10

DOCUMENT-IDENTIFIER: US 20040034514 A1

TITLE: Method for assembling the finite element discretization of arbitrary weak equations involving local or non-local multiphysics couplings

PUBLICATION-DATE: February 19, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Langemyr, Lars	Stockholm	MA	SE	
Bertilsson, Daniel	Sollentuna		SE	
Nordmark, Arne	Stockholm		SE	
Persson, Per-Olof	Cambridge		US	
Long, Jerome	Middx		GB	

Page 2 of 5 Record List Display

US-CL-CURRENT: 703/2

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw De

☐ 3. Document ID: US 20020072883 A1

L3: Entry 3 of 10

File: PGPB

Jun 13, 2002

PGPUB-DOCUMENT-NUMBER: 20020072883

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020072883 A1

TITLE: Method and system for high-resolution modeling of a well bore in a

hydrocarbon reservoir

PUBLICATION-DATE: June 13, 2002

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Lim, Kok-Thye San Ramone ÇA US Ward, Steven B. Austin ΤX US Kennon, Stephen R. Austin TX US

US-CL-CURRENT: 703/2

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KNNC Draw De

☐ 4. Document ID: US 20020050993 A1

L3: Entry 4 of 10 File: PGPB May 2, 2002

PGPUB-DOCUMENT-NUMBER: 20020050993

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020050993 A1

TITLE: Method and system for modeling geological structures using an unstructured

four-dimensional mesh

PUBLICATION-DATE: May 2, 2002

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47 Kennon, Stephen R. US Austin TX

Canann, Scott A. Austin TX US Ward, Steven B. Austin TX US

US-CL-CURRENT: 345/423

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw De

☐ 5. Document ID: US 20020035453 A1

Record List Display

L3: Entry 5 of 10

File: PGPB

Mar 21, 2002

PGPUB-DOCUMENT-NUMBER: 20020035453

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020035453 A1

TITLE: Method for solving finite element models using time slabbing

PUBLICATION-DATE: March 21, 2002

INVENTOR-INFORMATION:

NAME

CITY

STATE

COUNTRY

RULE-47

Pond, Stuart W. JR.

Cincinnati

OH

US

Barragy, Edward J.

Austin

ΤX

US

US-CL-CURRENT: 703/2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Drawi De

☐ 6. Document ID: US 20020032550 A1

L3: Entry 6 of 10

File: PGPB

Mar 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020032550

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020032550 A1

TITLE: Method for modeling an arbitrary well path in a hydrocarbon reservoir using

adaptive meshing

PUBLICATION-DATE: March 14, 2002

INVENTOR-INFORMATION:

NAME

CITY

STATE

COUNTRY RULE-47

Ward, Steven B.

Austin Austin TX TX US US

US-CL-CURRENT: 703/2

Kennon, Stephen R.

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw De

7. Document ID: US 20020032494 A1

L3: Entry 7 of 10

File: PGPB

Mar 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020032494

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020032494 A1

TITLE: Feature modeling in a finite element model

PUBLICATION-DATE: March 14, 2002

Record List Display

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Kennon, Stephen R. Austin TX US Ward, Steven B. Austin TX US

US-CL-CURRENT: 700/98; 700/29, 700/30

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw De

□ 8. Document ID: US 6674432 B2

L3: Entry 8 of 10 File: USPT Jan 6, 2004

US-PAT-NO: 6674432

DOCUMENT-IDENTIFIER: US 6674432 B2

TITLE: Method and system for modeling geological structures using an unstructured

four-dimensional mesh

DATE-ISSUED: January 6, 2004

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Kennon; Stephen R. Austin TX
Canann; Scott A. Austin TX
Ward; Steven B. Austin TX

US-CL-CURRENT: 345/419; 345/420

Full Title Citation Front Review Classification Date Reference Sequences Attackments. Claims KWIC Draw. De

☐ 9. Document ID: US 6313837 B1

L3: Entry 9 of 10 File: USPT Nov 6, 2001

US-PAT-NO: 6313837

DOCUMENT-IDENTIFIER: US 6313837 B1

\*\* See image for Certificate of Correction \*\*

TITLE: Modeling at more than one level of resolution

DATE-ISSUED: November 6, 2001

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Assa; Steven Brent Storeys Way GB

Hammersley; Richard Paul Austin TX Lu; Hong-Qian Austin TX

US-CL-CURRENT: 345/420; 345/428

☐ 10. Document ID: US 6100893 A

L3: Entry 10 of 10

File: USPT

Aug 8, 2000

US-PAT-NO: 6100893

DOCUMENT-IDENTIFIER: US 6100893 A

\*\* See image for Certificate of Correction \*\*

TITLE: Constructing solid models using implicit functions defining connectivity

relationships among layers of an object to be modeled

DATE-ISSUED: August 8, 2000

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

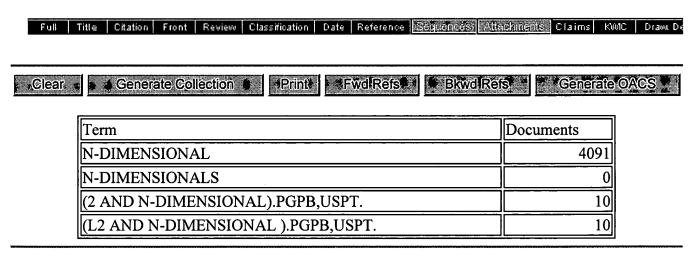
Ensz; Mark T. Albuquerque MN Ganter; Mark A. Edmonds WA

Lim; Chek T. Seattle WA

Storti; Duane W. Seattle WA

Turkiyyah; George M. WA Seattle

US-CL-CURRENT: 345/420; 345/441



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